

(12)特許協力条約に基づいて公開された国際出願

(19) 世界知的所有権機関  
国際事務局



(43) 国際公開日  
2004 年 1 月 15 日 (15.01.2004)

PCT

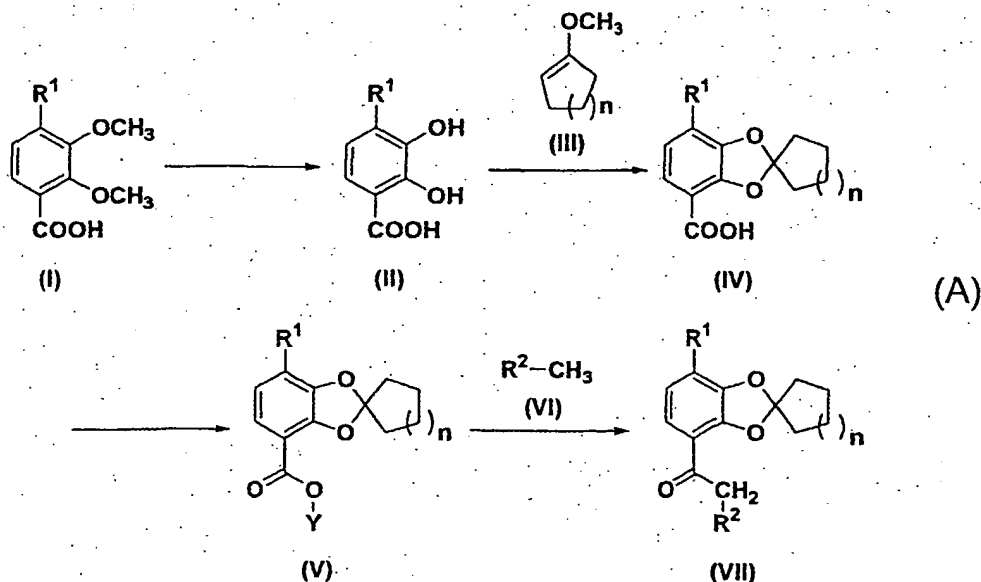
(10) 国際公開番号  
WO 2004/005276 A1

- (51) 国際特許分類<sup>7</sup>: C07D 317/72, A61K 31/357, A61P 1/04, 3/10, 9/02, 9/04, 9/10, 11/02, 11/06, 13/12, 17/02, 17/06, 25/24, 25/28, 29/00, 31/18, 37/02, 37/08, 43/00, C07C 51/377, 65/21, 65/03
- (21) 国際出願番号: PCT/JP2003/008478
- (22) 国際出願日: 2003 年 7 月 3 日 (03.07.2003)
- (25) 国際出願の言語: 日本語
- (26) 国際公開の言語: 日本語
- (30) 優先権データ:  
特願2002-194273 2002 年 7 月 3 日 (03.07.2002) JP
- (71) 出願人 (米国を除く全ての指定国について): 協和醗酵工業株式会社 (KYOWA HAKKO KOGYO CO., LTD.) [JP/JP]; 〒100-8185 東京都千代田区大手町一丁目 6 番 1 号 Tokyo (JP).
- (72) 発明者; および  
(75) 発明者/出願人 (米国についてののみ): 遅美 敏幸 (ATSUMI, Toshiyuki) [JP/JP]; 〒590-8554 大阪府堺市高須町一丁目 1 番 5 3 号 協和醗酵工業株式会社 堺研究所内 Osaka (JP). 柳沢 新 (YANAGISAWA, Arata) [JP/JP]; 〒590-8554 大阪府堺市高須町一丁目 1 番 5 3 号 協和醗酵工業株式会社 堺研究所内 Osaka (JP). 中條 巖 (CHUJO, Iwao) [JP/JP]; 〒590-8554 大阪府堺市高須町一丁目 1 番 5 3 号 協和醗酵工業株式会社 堺研究所内 Osaka (JP). 積木 浩 (TSUMUKI, Hiroshi) [JP/JP]; 〒100-8185 東京都千代田区大手町一丁目 6 番 1 号 協和醗酵工業株式会社 本社内 Tokyo (JP). 毛利 慎一郎 (MOHRI, Shin-ichiro) [JP/JP]; 〒590-8554 大阪府堺市高須町一丁目 1 番 5 3 号 協和醗酵工業株式会社 堺工場内 Osaka (JP).
- (81) 指定国 (国内): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,

[続葉有]

(54) Title: PROCESS FOR PREPARATION OF 1,3-BENZODIOXOLE-2-SPIRO- CYCLOALKANE DERIVATIVES

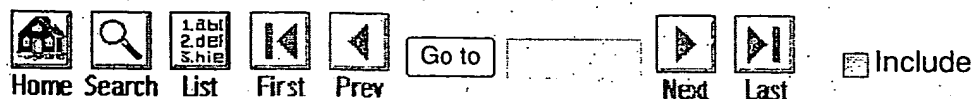
(54) 発明の名称: 1, 3-ベンゾジオキソール-2-スピロシクロアルカン誘導体の製造法



(57) Abstract: A process for the preparation of 1,3-benzodioxole-2-spirocycloalkane derivatives represented by the general formula (VII), characterized by adding a base to a mixture comprising a compound represented by the general formula (V) and a compound represented by the general formula (VI) to thereby make the compound (V) react with the compound (VI): (A) wherein R<sup>1</sup> is hydroxyl or substituted or unsubstituted lower alkoxy; R<sup>2</sup> is an aromatic heterocyclic group or the like; Y is lower alkyl or the like; and n is an integer of 1 to 6.

[続葉有]

WO 2004/005276 A1



## MicroPatent® PatSearch Fulltext: Record 1 of 1

**Search scope:** US Granted US Applications EP-A EP-B WO JP (bibliographic data only) DE-C,B DE-A DE-T DE-U GB-A FR-A

**Years:** 1991-2005

**Patent/Publication No.:** ((WO2004005276))

Order/Download Family Lookup Find Similar Legal Status EPO Register

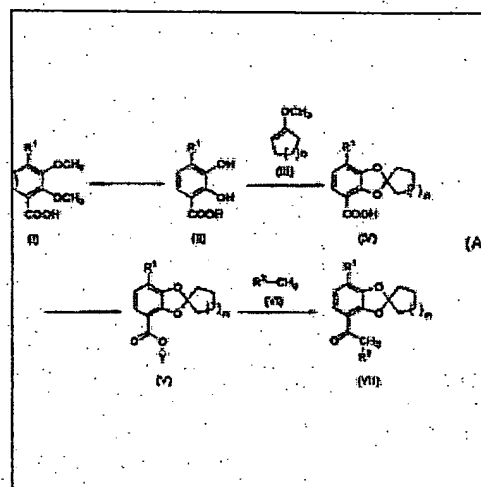
[Go to first matching text](#)

**WO2004005276 A1**  
**PROCESS FOR PREPARATION OF**  
**1,3-BENZODIOXOLE-2-SPIRO-**  
**CYCLOALKANE DERIVATIVES**  
 KYOWA HAKKO KOGYO CO., LTD.

**Abstract:**

A process for the preparation of 1,3-benzodioxole-2-spirocycloalkane derivatives represented by the general formula (VII), characterized by adding a base to a mixture comprising a compound represented by the general formula (V) and a compound represented by the general

formula (VI) to thereby make the compound (V) react with the compound (VI): (A) wherein R<sup>1</sup> is hydroxyl or substituted or unsubstituted lower alkoxy; R<sup>2</sup> is an aromatic heterocyclic group or the like; Y is lower alkyl or the like; and n is an integer of 1 to 6.



[Click here for larger image.](#)

**Inventor(s):**

ATSUMI, Toshiyuki  
 YANAGISAWA, Arata  
 CHUJO, Iwao  
 TSUMUKI, Hiroshi  
 MOHRI, Shin-ichiro

**Application No.** JP03008478 JP, **Filed** 20030703, **A1 Published** 20040115

**Int'l Class:** C07D31772

A61K031357 A61P00104 A61P00310 A61P00902 A61P00904  
 A61P00910 A61P01102 A61P01106 A61P01312 A61P01702 A61P01706  
 A61P02524 A61P02528 A61P02900 A61P03118 A61P03702  
 A61P03708 A61P04300 C07C051377 C07C06521 C07C06503

**Priority:**

JP 2002-194273 20020703

**Designated States:**

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE  
DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KR  
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG  
PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ  
VC VN YU ZA ZM ZW GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW AM AZ  
BY KG KZ MD RU TJ TM AT BE BG CH CY CZ DE DK EE ES FI FR GB GR  
HU IE IT LU MC NL PT RO SE SI SK TR BF BJ CF CG CI CM GA GN GQ GW  
ML MR NE SN TD TG

**Patents Cited:**

→ EP0771794 (X) [0]

**Patents Citing This One (6):**

- WO2004087147 A1 20041014 KYOWA HAKKO KOGYO CO., LTD.  
REMEDY AND/OR PREVENTIVE FOR LUNG  
DISEASES
- WO2004087148 A1 20041014 KYOWA HAKKO KOGYO CO. LTD.  
REMEDY AND/OR PREVENTIVE FOR LUNG  
DISEASES
- WO2004087149 A1 20041014 KYOWA HAKKO KOGYO CO. LTD.  
MEDICINAL COMPOSITION
- WO2004087150 A1 20041014 KYOWA HAKKO KOGYO CO. LTD.  
DRUG COMPOSITION
- WO2004087151 A1 20041014 KYOWA HAKKO KOGYO CO., LTD.  
MEDICINAL COMPOSITION
- WO2004096274 A1 20041111 KYOWA HAKKO KOGYO CO., LTD.  
DRUG FOR AIRWAY ADMINISTRATION

---

**French Title:** METHODE DE PREPARATION DE DERIVES DE 1,3-  
BENZODIOXOLE-2-SPIRO-CYCLOALCANE

**French Abstract:** L'invention concerne une méthode de préparation de dérivés de 1,3- benzodioxole-2-spiro-cycloalcane de formule générale (VII), caractérisés par l'adjonction d'une base à un mélange contenant un composé de formule générale (V) et un composé de formule générale (VI), pour obtenir une réaction du composé (V) avec le composé (VI). Dans ladite formule, R 1 est hydroxyle ou alcoxy inférieur substitué ou insubstitué; R 2 est un groupe hétérocyclique aromatique ou analogue; Y est alkyle inférieur ou analogue; et n est un entier compris entre 1 et 6.

---

[Go to Claims](#)**Detailed Description**

NotAvailable

**Claims (English)**

{n/a}

**Claims (French)**

{n/a}

**Claims (German)**

{n/a}

**Claims (Spanish)**

{n/a}



Home



Search



List



First



Prev

Go to



Next



Last

For further information, please contact:

[Technical Support](#) | [Billing](#) | [Sales](#) | [General Information](#)